



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

DATE: MAY 1 2017

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Waste Management - Countryside Landfill, Grayslake, Illinois

FROM: Kenneth Ruffatto, Environmental Engineer
AECAB (IL/IN)

THRU: Natalie Topinka, Acting Section Chief
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Waste Management - Countryside Landfill

Facility Location: 31725 IL-83, Grayslake, Illinois 60030

Date of Inspection: April 18, 2017

Lead Inspector: Kenneth Ruffatto, Environmental Engineer

Other Attendees:

1. Vicky Mei, Environmental Engineer, US EPA
2. Brad Stenzel, Operations Manager, Waste Management
3. Matt Raine, Gas Technician, Waste Management
4. Charles Davis, Gas Technician, Waste Management

Purpose of Inspection: Compliance inspection for the Clean Air Act (CAA) and Municipal Solid Waste Landfill NSPS and NESHAP in response to a citizen complaint of odor.

Facility Type: Municipal Solid Waste Landfill.

Regulations Central to Inspection: New Source Performance Standards for Municipal Solid Waste Landfills (40 CFR Part 60, Subpart WWW); National Emission Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills (40 CFR Part 63, Subpart AAAAA).

Arrival Time: 10:00 AM

Departure Time: 11:30 AM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Credentials Presented
- ☒ CBI warning to facility provided

The following information was obtained verbally from Waste Management staff unless otherwise noted.

Process Description and Staff Interview:

Countryside Landfill (the Landfill) is a municipal solid waste (MSW) landfill owned and operated by Waste Management located in Grayslake, Illinois. The Landfill started accepting waste in 1974 as a private company and was acquired by USA Waste which was later acquired by Waste Management. The Landfill requested horizontal expansions in 1994 that were later approved in 1996. The expansions were constructed on the north and south sides of the existing landfill. The Landfill currently spans approximately 136 acres. Some of the slopes on the south end and around the north boundary of the Landfill are capped with a 50 mil super-grip geomembrane and 4 feet of clay. Waste is currently being filled in Cell 4A since July 2016 at a rate of 1,400-1,500 tons per day and is composed of mostly MSW but also accepts construction and demolition (C&D) waste, contaminated soils, asbestos and medical waste. The Landfill keeps a daily fill report and asbestos log to keep track of waste coming into the site. Staff also do inspections of C&D waste to prevent drywall from coming in. There is currently an estimated 8-10 years of airspace left to fill and the Landfill will have two peaks at 930 feet and 890 feet. The Landfill currently uses a variety of material as daily cover including plastic tarps, wood, soil, clay and cloth tarp. Monthly cover inspections are done by Mr. Stenzel to document and fix deficiencies.

The Landfill has an active gas collection and control system (GCCS). The GCCS is composed of approximately 133-136 active vertical and horizontal gas wells venting gas to a landfill gas-to-energy (LFGTE) plant off-site owned and operated by Countryside Genco, LLC or two enclosed flares. The LFGTE plant has four engines that take all of the approximately 3,100 standard cubic feet per minute of gas. In the event that the LFGTE plant is down, the gas is sent to the enclosed flares through a manual system, but the flares typically do not need to run. Mr. Raine indicated that the system could not be down for more than one hour and it takes about five minutes to start-up the enclosed flares. The gas technicians work with the LFGTE plant. At the time of inspection, the Landfill was installing additional gas extraction wells nearby the active areas referred to as a "gas project". This gas project included trenching work to lay new gas header lines and drilling additional vertical and horizontal gas extraction wells. Gas technicians do wellhead monitoring and tuning in addition to measuring water levels in wells. They also perform monitoring on perimeter gas probes to watch for gas migration. Multiple probes at the

site have shown measureable levels of methane including a probe on the south end and one on the southeast end. These were identified and corrected approximately one year and two to three years ago, respectively. On the southwest end of the Landfill, multiple small gas probes were installed at the boundary and connected to the GCCS. This system is left on and no monitoring is done on it besides visual checks. When wells are watered in, the Landfill adds pumps to pump out the water to see whether there is a noticeable difference in the amount of gas collected. The Landfill uses an outside consulting firm, EMT, to perform surface emission monitoring and have not found exceedances of methane gas in a couple years. Leachate from the Landfill is sent to four leachate storage tanks that hold approximately 62,000-72,000 gallons of leachate collectively. Three trucks haul approximately four loads of leachate each a day to the Kenosha, Wisconsin wastewater treatment plant.

TOUR INFORMATION

EPA toured the facility: Yes

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

- Landfill well map
- Landfill overhead picture

CLOSING CONFERENCE

Requested documents:

- GCCS Design Plan, most recent
- 2017 Monthly Well Data
- 2016-2017 Surface Emission Monitoring Reports
- 2016 NSPS Semi-Annual Reports
- 2016-2017 Gas Probe Monitoring

Concerns: EPA noticed a slight sweet odor on the north end of the Landfill; wind was coming from the south. Mr. Stenzel indicated that the gas project may be causing current odors.

SIGNATURES

Lead Inspector: Kenna R. Miller Date: 5/1/2017
Section Chief: Natalie Pir Date: 5/1/17

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APPENDICES AND ATTACHMENTS

- Appendix A: Photos

Facility Name: Countryside Landfill
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APPENDIX A: PHOTOS

Photo #	Date/Time	Description
P4180001	4/18/2017 10:48 AM	Boundary gas extraction probes
P4180002	4/18/2017 10:54 AM	Active cell
P4180003	4/18/2017 10:55 AM	Active cell